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SCIENTIFIC AND TECHNICAL INFORMATION

CAMERON STATION, ALEXANDRIA, VIRGINIA



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63-3-5
(1) Therianatomy & embryology (max 10 marks)
(2) 869 000 (1)

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Dear Doctor Galler:

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10. Two conclusions are evident. The reproductive rate of the Dolphin is so low that there is danger of extermination, unless the decreasing numbers make dolphin hunting unprofitable. The two periods of conception, already suggested for the whales, is corroborated for the Dolphin. July and late October are suggested by International Fisheries data. The first embryo taken December 6 is one month old and the second taken January 20 is a little over two months old.
11. The total collection of the Whales Research Institute is small but they have on two occasions given me young embryos. I have one large fetus from Palles Verdes California and two from Rockport Texas. Altogether I have the following materials which I am studying comparatively.
 - a. A 4.2 mm. Stenella embryo in transverse series. Atlas published.
 - b. A 14 mm. stenella described in detail by Dr. Hosokawa and drawn by me in complete series using camera lucida, at the Univ. of Tokyo.
 - c. A 25 mm. stenella in sagittal series of paraffin sections.
 - d. A 27 mm. stenella in transverse celloidin series.
 - e. A 35 mm. embryo in nearly complete series from two blocks.
 - f. A 55 mm. stenella in several blocks some in complete series other in skip series sufficient for my study.
 - g. A 73 mm. stenella in skip series from several blocks.
 - h. An 85 mm. stenella in skip series.
 - i. A 170 mm. stenella not fixed for histological study.
 - j. A 375 mm. Tursiops embryo fit only for dissections.
 - k. A 1600 mm. fetus already dissected and drawings made.
 - l. A 2184 mm. fetus which is being studied for histological detail.
 - m. A brain from a young Tursiops being studied from gross sections with microscopic sampling.
12. Using the entire series and often making human comparisons I project:
 - a. A study of changing external form and particularly skull growth.
 - b. Brain reconstruction to account for tremendous relative enlargement.
 - c. The olfactory system which is large in the embryo and disappears.
 - d. The anterior cerebral ganglion published for both Dolphin and Man. The origin of this ganglion is still controversial and functions are unknown. However, on the basis of a theoretical guess I predicted a similar pair in the tentorium and located it in a 37 mm. whale in Tokyo. I now want its human equivalent.
 - e. The history of the ganglion of the fourth nerve. Published in part.
 - f. Peculiarities in the development of the eye and lids. Ciliary ganglion.
 - g. Development of the ear and larynx.
 - h. The peculiar development of skin and blubber. Pigment distribution.
13. The trip served also to permit some secondary objectives:
 - a. Study of microscopic materials at the Univ. of Tokyo.
 - b. Study of silver staining methods of Dr. Seto of Sendai and of Dr. Suzuki of Osaka.
 - c. It permitted lecture seminars to be given at Tokyo, Sendai, Sapporo, Hirasake, Nagoya, Osaka, Tsu and to several special societies.
 - d. The grant also permitted some technical work in Galveston, Texas.

Hopping this will be regarded as ^{the} ~~the~~ final report I remain.

John G. Sinclair
Prof. Emeritus of Anatomy

U. B. Texas Med. Branch

MAY 2 1963

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